

REMARKS

No claim has been amended. Claims 2-6 remain in the application.

Claims 2-6 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over an article by Wuthrich et al. entitled "Daily Stock Market Forecast from Textual Web Data" ("the Wuthrich article") in view of an article by Roesler et al. entitled "Intelligent Agents" ("the Roesler article"). In the rejection, the Examiner alleged that the Wuthrich article discloses the invention "except interpreting words as pronouns" but that the Roesler article discloses intelligent agents used to locate items. The Examiner concluded that it would have been obvious to one of ordinary skill in the art to modify the system taught in the Wuthrich article based on the teachings of intelligent agents in the Roesler article to interpret words as pronouns. The only motivation offered by the Examiner for combining these teachings is "to efficiently and effectively predict the stock market from news data." The teachings of these references are wholly inadequate and, accordingly, the Examiner clearly has not established *prima facie* obviousness. Withdrawal of the final rejection is respectfully requested.

As set forth in M.P.E.P. §§2142-2143.03, in order to establish a *prima facie* case of obviousness, patent examiners are required to establish three criteria: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference, or combination of references, must teach or suggest all the claim limitations. The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. To make a proper obviousness determination, the examiner must "step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made." In view of the available factual information, the examiner must make a determination as to whether the claimed invention "as a whole" would have been obvious at that time to a person of ordinary skill in the art. Importantly, a rejection based on these criteria must be based on what is taught in the prior art, not the applicant's disclosure. The applicant's disclosure may not be used as a blueprint from which to construct an obviousness rejection.

Claim 2 recites a method of predicting stock market behavior using natural language processing, comprising:

extracting information from news media relating to a particular publicly traded company to create a template including natural language text describing activities or announcements of said particular publicly traded company;

relating changes in stock price of said particular publicly traded company to information stored in said template about said particular publicly traded company;

determining a statistical significance of said changes in stock price of said particular publicly traded company based on said information; and

predicting changes in price of the stock of said particular publicly traded company based on new information about said particular publicly traded company if information of the type included in the new information has in the past caused a statistically significant change in the stock price in said particular publicly traded company.

Applicant submits that the Examiner has not provided a suggestion or motivation to enable one skilled in the art to combine the teachings of the references as proposed by the Examiner and, in any case, the proposed combination of teachings does not teach or suggest at least the italicized claim limitations in claim 2 from which all claims depend. In view of the fact that the Wuthrich article and the Roesler article taken together do not teach all of the claimed features of claim 2, even if the teachings of these references could be combined as the Examiner suggests, the method of claims 2-6 could not result. The Examiner has thus failed to establish *prima facie* obviousness and the final rejection of claims 2-6 should be withdrawn.

As evidenced by the italicized language in claim 2 above, the invention predicts changes in the price of the stock of a particular company by relating changes in stock price of the *particular publicly traded company* to information stored in a template including natural language text describing activities or announcements of the particular publicly traded company *about said particular publicly traded company*. Changes in price of the stock of the particular publicly traded company may be predicted based on new information about the particular publicly traded company if information of the type included in any new information has in the past caused a statistically significant change in the stock price in the

particular publicly traded company. Thus, the gathered information is related to a *particular company* for which stock price predictions are to be made. Such methods are not taught in the Wuthrich or Roesler articles.

In contrast with the invention, the Wuthrich article describes a method of predicting the *daily closing values of major stock market indices* using information published in articles on the Internet - mostly textual articles appearing in the leading and influential financial newspapers. Keywords in the textual language, such as "bond strong," "dollar falter," "property weak," "dow rebound," "technology rebound strongly," etc. (bottom of column 2 of page 2721) are taken from the articles by a domain expert and weighted if determined to be influential factors that may potentially move the stock market indices. Such keyword data is not information "relating to a particular publicly traded company" and is not used to "create a template including natural language text describing activities or announcements of said particular publicly traded company" as claimed. The Wuthrich article does not teach how the keyword data is related to individual stocks and the described system makes no effort to predict the price of individual stocks using such keyword data. In fact, the system described in the Wuthrich article in no way relates the keyword data to the price of any individual stock and, in any case, it is unclear how such keyword data disclosed in the Wuthrich article could be related to the price of an individual stock as opposed to the stock index. Thus, the Wuthrich article does not generally teach the claimed invention as suggested by the Examiner.

On the other hand, the Roesler article describes the use of intelligent agents for locating items within received textual content (pages 26 and 28). The Roesler article does not suggest that intelligent agents could be used to parse sources of information for information about a particular publicly traded company, to standardize different references to the particular publicly traded company by different proper names, or to co-reference when the particular publicly traded company is referred to by pronouns as set forth in claim 4, for example. In fact, the Roesler article also provides no teaching of co-referencing pronouns or of clustering data about different companies as claimed. Applicant does not see any particular relevance of the teachings of the Roesler article to the claimed invention and the Examiner has not provided any guidance.

In view of the afore-mentioned shortcomings in teachings of the Wuthrich and Roesler articles, Applicant submits that the Wuthrich and Roesler articles taken separately or together do not teach or suggest all of the claim limitations and hence cannot establish a *prima facie* case of obviousness, even if the teachings of these references are combinable as proposed by the Examiner. To the extent the Examiner suggests to the contrary in the Final Rejection, Applicant respectfully disagrees. Withdrawal of the rejection of claims 2-6 as being obvious over the teachings of the Wuthrich and Roesler articles is respectfully solicited.

The Examiner has further failed to provide a *prima facie* case of obviousness with respect to any claim since the Examiner has not met her burden of providing a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the reference teachings. Instead, the Examiner has provided general references to "efficiently and effectively predict the stock market from news data." Applicant submits that such general statements of motivation to combine made by the Examiner, without support in the references themselves or evidence that suggestions to combine are in the knowledge generally available to one skilled in the art, do not meet the Examiner's initial burden of factually supporting any *prima facie* conclusion of obviousness. Such a piecing together of disparate teachings, without sufficient motivations or suggestions to combine, suggest to Applicant that the Examiner has improperly used Applicant's disclosure as a blueprint for the obviousness rejection.

The Examiner further appears to suggest in the obviousness rejection that knowledge of artificial intelligence and/or neural networks is all that is necessary to lead one skilled in the art to combine the teachings of the Wuthrich and Roesler articles to provide the claimed methods, including pronoun co-referencing and the like. Such general suggestions clearly do not provide the requisite motivation to combine the teachings of these articles with the necessary expectation of success. Moreover, as the requisite teachings of the claimed features are not provided in either article, the requisite teachings cannot be in the combination in any case.

For these reasons, if the Examiner elects to maintain the obviousness rejection, the Examiner is strongly urged to clearly articulate the evidence of suggestions, motivations, or knowledge possessed by those skilled in the art that would have led one skilled in the art to

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combine the disparate prior art teachings in the Wuthrich and Roesler articles to arrive at the claimed invention and to articulate where the claimed features are taught by the cited references as required by M.P.E.P. § 706.02(j). Such information is required to sustain any *prima facie* obviousness and to allow Applicant the opportunity to provide a meaningful rebuttal to the Examiner's position.

For the above reasons, withdrawal of the obviousness rejection and withdrawal of the finality of the official action are respectfully requested.

Conclusion:

The claims as presented, without amendment, are believed to be novel and nonobvious over the prior art cited by the Examiner. Since the Examiner has failed to establish *prima facie* obviousness, the obviousness rejection and the finality of the Official Action must be withdrawn. Upon reexamination, a Notice of Allowability is respectfully solicited.

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